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EXEMPT from Declass.
Per E.O. 12065, Sec. 3-4
Re-review-1989

~~CONFIDENTIAL~~

NOTE:

The following facts will facilitate interpretation of some of the information supplied in [redacted] memorandum of January 9, 1942.

Before the war (as now), Opel's entire production of trucks was concentrated at the Brandenburg plant. Opel's entire output of passenger cars (110,000 units annually) was produced at the Ruesselsheim plant, where about 17,000 workers were employed on this activity. It is these men that were laid off when passenger car production was stopped in August, 1939.

The passenger car facilities and workers were subsequently converted to the production of the air craft parts referred to on page 3 of [redacted] report. In addition, the plant at R manufactures parts for the trucks made at B, as it did before the war.

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January 9, 1942

Coordinator of Information
Washington, D. C.

Subject: Interview with [redacted]

Dear Sir:

Reference is had to conversation with Mr. Chandler Morse of your Office and to a letter of December 22, 1941 from Mr. Emile Despres regarding a proposed interview with [redacted]

The undersigned spent a number of hours with [redacted] The questionnaire attached to Mr. Despres' letter was used as a guide during the interview in order to cover as much of the ground, in which you are particularly interested, as possible. This report of the interview will therefore follow very closely the questionnaire.

Production

1. Current passenger car production at the Opel Plant is zero. It is estimated that approximately 80 three-ton Blitz trucks are being produced daily at the Opel Plant at Brandenburg near Berlin. Monthly production is estimated at 2,000 units. These are all the military adaption of the standard Blitz Commercial Truck, approximate specifications being 166" wheelbase, 4x2 drive, wood cargo body with troop seats, 85 H.P., six cylinder gasoline engine. This truck is the German equivalent of the Ford and Chevrolet 1-1/2 ton truck in the U.S.A.

The Brandenburg Plant has also been tooled to produce a four-wheel drive three-ton model for use as a cross-country troop and cargo carrier. Production was to start on this job in June, 1941. It is believed that possibly 250 per month of this model are currently being built.

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The complete manufacture of the above trucks is carried out at Brandenburg except for sheet metal, rear axle gears, and brake cylinders which are manufactured in the main Opel Plant at Ruesselsheim-am-Main.

The above production figures compare with pre-war production as follows: Passenger car production 10,000 units per month equals 110,000 per year, allowing for inventory time. Truck production, 1,750 per month equals 20,000 per year. Since the Munich meeting of September, 1938 all Opel truck production has been exclusively for the German Army except for small allotments for export.

All spare parts for Opel passenger cars and Blitz trucks except current production models are produced in the Ruesselsheim factory. According to latest reports this production is being maintained at approximately the pre-war rate which amounted to around 3,000,000 Reichsmarks monthly. This spare parts production requires the labor of 5,000 workmen.

In connection with Opel Blitz truck production at Brandenburg, it is interesting to note that since 1938 the Army procurement services have urged Opel to attain a production rate of 100 3-ton, 4x2 trucks per day. The factory is capable of meeting this rate but has never been able to obtain sufficient tires and batteries through the allocating authorities to turn out the production which the Army desires.

2. The principal non-automotive items manufactured in the Opel Plant at Ruesselsheim are the following:

Reduction gears for reducing the propeller speed for the Mercedes Liquid Cooled Craft Engine. (It is understood that the U. S. Air Corps is familiar with this engine and the reduction gear box. Samples are available at the Allison Motors Plant.) A separate plant was established at Ruesselsheim for the production of these reduction gears. Production started approximately July, 1939. The plant now employes 250 to 300 men per shift. It is understood to be working on two 12-hour shifts. It is estimated that production is 250 to 300 sets of gears per month, although in checking this figure with the Cadillac production department in Detroit, where similar gears are being produced for Allison, it would seem that production should be much higher, probably 450 sets per month. [redacted] guess at output of the Mercedes engine is that they are manufacturing 1,000 to 1,200 engines per month.

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In connection with the above activity there is of possible interest the fact that the German Government asked the Opel Company to furnish laboratory facilities for a University Professor who was considered the top gear man in Germany. These facilities were provided but the professor had a skiing accident in which he badly fractured both legs and was incapacitated for over a year, so [redacted] opinion is that little research has been carried out.

The production of the aircraft reduction gears was carried on concurrently with production of passenger cars and trucks at the Opel Plants. Coincident with the opening of the campaign in Poland in August, 1939 passenger car production was immediately stopped and 17,000 workers were laid off pending conversion of the Ruesselsheim Plant for the production of:

a. Wiring harnesses
b. Wing assemblies
c. Tail surfaces
d. Hydraulic landing gears
e. Gasoline tanks

all for the Junkers Model U88 bombers. All of the 17,000 workers laid off had been reabsorbed by June, 1940. It is estimated that 100 units per month of the above assemblies were being turned out at that time. The Opel Plant also has under consideration a project for the manufacture of Ordnance fuses but it is not known whether production has been started.

3. [redacted] was not prepared to hazard guesses as to the output of the above items by other automotive plants except as regards total truck production which will be found in a later paragraph.

4. [redacted] estimate total automotive registrations in Germany as of August, 1939 at 2,000,000 passenger cars. Of these a very small number were actually owned by the Army which in time of war expected to and effectively did requisition privately owned cars for their use. Of these 2,000,000 passenger cars, it is estimated that 45% were in the smallest class with a cylinder displacement up to one liter. These are almost completely useless for military purposes. It is estimated that 30% were in the 1.5 liter class of which 1/2 might be considered of some military value. Twenty per cent are believed to have been in the 2 to 2.5 liter class; in terms of body space and performance, these would approach the American Ford and Chevrolet. These were the most popular size with the German Army. The remaining 5% are in the over 2.5 liter category and were used only as Staff cars for the higher officers, etc.

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[redacted] would not hazard a guess as to quantities of light trucks in Germany. Many of these were of the three-wheel variety and even the four-wheel delivery van types were too light in construction to be of any military value.

They estimate total ownership of trucks three-ton (this German rating corresponds to the American Ford, Chevrolet class) and over at 300,000 units as of August, 1939. Of these approximately 70,000 were owned by the Army. This figure is based on Opel Blitz sales to the German Army which were approximately 9,000 units per year for the four years preceding hostilities and represented 50% of Army purchases of transport vehicles.

Based on German industry figures, 3% of truck production was of the heavy duty type of 5 tons and over. These include the big diesel tractor-trailer combinations which were a familiar sight on the German roads and have since been an important link in the German Military supply system. It is estimated that there are a total of 20,000 of these tractor units. These jobs are capable of carrying 8 to 10 tons on the tractor chassis and at the time tow a load of 10 to 20 tons. The principal manufacturers of these diesel units were Mercedes, Henschel, M.A.N., and Krupp.

According to [redacted] the German Army also used considerable quantities of 6x6 (six wheel, six wheel drive) heavy artillery tractors and "half-track" medium artillery tractors. He would not hazard a guess as to the quantities of these vehicles in the German Army. It is known, however, that both of these types have been very unsatisfactory in service. As an illustration of this [redacted] cited the invasion of Austria, where so many of these special vehicles failed between the German border and Vienna that a great majority of the commercial trucks in Bavaria had to be requisitioned overnight and were sent into Austria to salvage the equipment which had failed. On his way back to Berlin, Hitler paid a personal visit to the Opel Plant and personally signed an order for 2,000 trucks as a compliment to the Opel Works for the high performance of the commercial vehicles which had gotten the Army out of a bad spot.

[redacted] concurred that the maximum output of trucks three ton and up in Germany is 60,000 to 70,000 units per year. Their estimate of peak annual pre-war passenger car production is 243,000 units. This figure is based on Opel's allocated share of total German industry output as follows:

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Opel production for German market	80,000	=	40% of total	
Total German market				200,000
Opel production for Export	30,000	=	70% of total	
Total Export				43,000
Total German production				243,000

[redacted] the writer has heard considerable discussion of the Standardization Program imposed on the German automotive industry by the government. This program does exist but the results effected up to August, 1939 were far less than is generally believed in this country. Like all matters affecting the German automotive industry the Standardization Program was controlled by General Von Schell of the Verkersministerium (Transport Ministry) in conjunction with the Automobilwirtshaftsgruppe (Industry Council) composed of representatives of the manufacturers. Much valuable work was accomplished in reducing the variety of components and accessories; for instance in 1936 there were 31 types of engine oil pumps used on German cars, whereas in 1939 there were only 5 or 6 standard types. However, the Germans were still far behind the U. S. Bureau of Standards and the S.A.E. in this connection.

In so far as the standardization of vehicle types is concerned, the first year in which this was to be effective was 1940 but actually nothing was done because of the war and the conversion of automotive plants to strictly military production. Although General Von Schell's powers on standardization were dictatorial, the approach up to August, 1939 was very gradual and persuasive rather than by mandatory decree. For instance, General Von Schell ruled in 1937 that truck users would be allowed a reduction in the annual tax if they purchased vehicles conforming to certain basic specifications desired by by the Military Authorities. These specifications concerned loading height, angles of approach and departure, engine power, etc. In spite of the competitive advantages of building vehicles to meet these specifications, [redacted] point out that the three-ton Opel Blitz truck was the only vehicle built to take advantage of the reduced user's tax. Normally the annual tax on a truck of this size would be 300 Reichsmarks, which was reduced to 170 Reichsmarks.

5. The information regarding airplane production, supplied

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by [redacted] is based on a confidential statement made [redacted] in June, 1940 by Dr. Hans Strack, Legationsrat, of the German Foreign Office whom he believes to be in a position to have authentic data. Dr. Strack's estimate of production at that time was 2,500 to 3,000 units per month of all types. The estimated available planes was 50,000 to 70,000 units, again of all types.

[redacted] were not normally in a position to have information on the output of Ordnance items (in Nazi Germany it was more comfortable not to know certain things) but [redacted] cited several examples to indicate the plentiful availability of anti-aircraft guns. One example was the protection of the Opel Plant for which he estimates that 300 to 400 guns were placed in the Ruesselsheim Weisbaden district. The smallest of these were 37 mm's with a certain proportion of larger guns up to 90 mm's.

[redacted] is unfamiliar with the situation regarding submarines. He pointed out that in view of the difficulty of obtaining batteries for military trucks, there must be a very tight situation on the lead required for submarine batteries.

With regard to petroleum inventory and output, [redacted] cited a figure of 8,000,000 tons as being Germany's normal peacetime consumption. He understands that they planned a war-time consumption of 18,000,000 tons and that the production of synthetic petroleum products was 12,000,000 tons in 1940. Of course, a strict rationing of petroleum products has been in effect in Germany since before the war. However, it is interesting to note that according to [redacted] the supply of diesel fuel has been more restricted than the supply of gasoline. It appears that all crude oils are not equally suitable for the quantitative production of diesel fuel and that the crude from Russian sources is considerably more satisfactory for diesel oil production than Roumanian crude.

With regard to lubricating oils the supply of these seem to be sufficient and the quality satisfactory under normal German operating conditions. However, according to [redacted] these lubricants contain a high percentage of tar which gives very unsatisfactory results under extremely low temperatures. I discussed with [redacted] in some detail the apparent failure of German Motor Transport on the Russian front under winter conditions. It was distinctly his opinion that this was not due to any fault of design or construction of the vehicles but almost entirely to the unavailability of suitable lubricants for extreme low temperature operation.

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With regard to synthetic rubber products, [redacted] could not recall offhand much of the data on this industry. He stated that shortly before the war he had prepared a complete report on the subject [redacted] and would attempt to find a copy of it which he would be happy to submit to Colonel Donovan. Generally speaking on this subject [redacted] pointed out that the greatest difficulty in manufacturing tires from synthetic rubber has been caused by the fact that synthetic "Buna" rubber will not stick to the tire fabric. It is therefore necessary to immix approximately 30% natural rubber with the synthetic product. This is done in such a way that the part of the tire tread in contact with the fabric casing is 100% natural rubber whereas the outer surface of the tire is 100% synthetic rubber. Apparently there has been great difficulty in securing the quantity of natural rubber required to fully utilize the German synthetic rubber capacity. [redacted] was given to understand by representatives of the German tire manufacturers that the "Buna" rubber program was two years behind schedule in 1940. The two principal producing plants for "Buna" will be found listed at the end of this report in the list of critical plants.

Steel ingot production in the Reich is estimated by [redacted] at 18,000,000 tons per year. Steel has been rationed to the automotive industry in Germany since 1937. The allocations for domestic passenger car production were constantly decreased until they were entirely discontinued in August, 1939. [redacted] believes that the production of steel in Germany is being carried on at full capacity. Prior to the war, Germany absorbed approximately 30% of the Swedish iron ore output. With 100% of this ore now available to Germany, there is no reason to believe there may be a shortage of raw materials. As regards other metals, [redacted] pointed out that apparently there was no shortage of aluminum, magnesium, and manganese. All of these metals are of course on an allocation basis but, for example, there has been no pressure from authorities to substitute other metals for aluminum pistons in German cars and trucks. On the contrary, many automotive parts, such as wiring harnesses, coils, etc., which were formerly made of copper are now being manufactured of aluminum.

Chromium, nickel, tin, and lead have all been under very strict allocation for a number of years and are very difficult to obtain with every effort being made to find substitute material.

It is believed that the supply of coal from German and occupied French, Belgian, Czechoslovak, and Austrian mines is adequate although Germany has had to assure the supply of the Scandinavian countries, Italy, and Switzerland which were formerly supplied largely from England. There has been, every winter since the war,

an acute shortage of coal for domestic heating but it is believed that this is caused by a lack of transportation facilities rather than by a lack of coal at the mines. In 1939 rather serious labor trouble was experienced in the German coal mines and it is understood that this situation has never been satisfactory since then.

Labor Supply

1. [redacted] has made a note to obtain complete data on this subject to submit to Colonel Donovan. Generally speaking, the employment at the Opel Blitz Truck Plant at Brandenburg increased from 1,500 to 3,000 and at the main Opel Plant at Ruesselsheim, form 19,000 to 23,000 between 1937 and 1940. The new hands were recruited principally form agriculture and other trades. High wages in the Opel Plants attracted workers from other industries and while theoretically it is not possible for a German worker to change his job without permission from the authorities, [redacted] states that in practice this has never been closely controlled. However, the labor rates in the Opel Plants were relatively so attractive in 1940 that the Government Labor Officials reclassified many jobs and effected an overall reduction of earnings in the Plants.

The new workers added to the force at the Opel Plant were trained by Opel. However, since the war there has been a noticeable lowering of the quality of the workmen employed. This has been caused principally by a higher ratio of young and inexperienced workmen and by the necessity of employing poor physical specimens. Very few women workers were employed in the Opel Plant on automotive production. Since aircraft material has been in production, the number of women workers has been increased but does not amount to a sizeable proportion of the total.

The only foreign workers employed by Opel are a group of 200 to 300 Czecks who were recruited by the German Labor Offices in Czeckoslovakia and placed in the Opel Blitz Truck Plant at Brandenburg. These men have proved to be satisfactory productive workers but considerable trouble was experienced because of friction between these Czecks and the German workers. Consequently it has been necessary to keep the Czecks all together in certain departments and it has also been found necessary to erect barracks on the factory grounds to house them.

German labor law requires that manufacturers train a minimum ratio of apprentices to total employment. The opel Plant at

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Ruesselsheim maintains an apprentice school for 1,200 fourteen to eighteen year old boys. It has been planned to increase this number to 1,800 but the space is not available and this project has been deferred until after the war. The apprentice training period lasts four years during which the apprentices are paid 30 Reichsmarks per month. [redacted] stated that Opel always has a long waiting list of boys who want to get into this school. Most of those accepted are sons of Opel workmen. Very complete facilities are available for the training in a special school section of the plant. Practically every type of productive machine is operated in the school and in addition, the apprentices are given classroom work in such subjects as arithmetic and mechanical drawing. The apprentices are never used to operate productive machinery in the plant proper but when added production is required in the plant, the apprentice machine tools are occasionally up to turn out production items.

2. In so far as [redacted] are aware there is no systematic plan for shifting men from the plant to the Army and back. On the contrary, since the invasion of Poland through the invasion of France and down to the present, the movement has been all one way; that is, from the plant to the Army. There have been a proportion of cases where men were discharged from the Army and returned to the Plant. In these cases the plant is bound to restore the man to the job he occupied when called to duty. In a very few instances, men who had been discharged have been recalled a second time to the Army but these were all special cases of Army interpreters and other specialized personnel.

3. The organization of labor in a German Plant is rather confusing because of the inter-relationship of Government and Party. There is an official Government labor organization under a Ministry of Labor which is responsible for the operation of employment bureaus and the administration of German labor laws. There is also the Nazi Party Labor Organization, the "Arbeitsfront" to which all employees belong and the primary job of which is the political education of the German workmen. Very frequently the Government and Party organizations fuse because the Government labor official for a certain Plant or a certain district will also be the Party labor representative for the same Plant or area. In the Opel Plant, the labor organization was as follows:

The top labor man in the Plant is the Betreibsfuhrer (Works Leader). Normally in a German factory this post is occupied by the head of the company. Since the Opel Company was under American management, it was necessary to have a German occupy this job. The Betreibsfuhrer was chosen by the company but had to be

approved by the Nazi Party, specifically by the Gauleiter of the district. As a rule the Betreibsfuhrer would be a Party member although in the Opel Plant the treasurer of the Company was appointed to this post and he was not a member of the Nazi Party.

Under the Betreibsfuhrer is an elected group of employees known as the "Betreibsrat" (Works Council). In the Opel Plant at Ruesselsheim, this consisted of ten men. These men are nominated by the Betreibsfuhrer and elected by the employees for a period of one year. No immediate choice of candidates is given to the employees; ten men are nominated and voted on; if one or more of them do not obtain a given percentage of the total vote they are not elected and alternate condidates are nominated.

The Betreibsrat is presided over by a Betreibsobman who is appointed by the Nazi Party. The company has absolutely nothing whatsoever to say about the choice of this functionary. Under the Betreibsrat the Plant is organized into 'Cells', on a more or less departmental basis. In other words 8 or 10 tool makers in a separate department would have their own Cell, whereas 200 workers in another department would also have one Cell. Each of these Cells has a Cell Obman. If a workman has any complaint, he goes to his Cell Obman who takes the matter up with the Departmental Foreman or Supervisor. If they can't settle the matter, it is taken up at the weekly meeting of the Betreibsrat (incidentally this meeting is held on company time and the company has no control of the time spent by Cell Obman on labor problems. In many instances it is necessary to engage an extra productive worker to take the place of one who is elected to the Betreibsrat or made a Cell Obman.) If the matter can still not be settled in the Betreibsrat, it is taken up with the Betreibsfuhrer for settlement with the General Management of the company. If the Management does not settle it to the satisfaction of the worker, the matter is referred to the Nazi Kreisleiter (District Labor Leader), whose decision is practically final although on certain major issues, appeal could be made to the Gauleiter and eventually to Party Headquarters in Berlin.

Of course in a German plant the types of complaints which the workers and management have to arbitrate are relatively restricted, inasmuch as no strikes are allowed under any conditions and no discussion of basic wage rates is allowed. Incentive wages may be discussed but a ceiling is placed on these by the labor authorities. (Consequently very few questions cannot be settled in the plant.) A majority of the labor representatives in the plant are Nazi party members. [redacted] was unable to state whether any of those in the Opel Plant had formerly been Union officials.

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As can be seen from the above, the labor representatives are usually production workers or occasionally clerical employees who are chosen by their fellow workers. There are, however, certain individuals in the organization who are placed there by the Party organization whether the management likes it or not. These include the Betreibsobman referred to above and also members of the Gestapo and S. S. Corps and, if the plant has any military potentialities, as was the case with the Opel Plant, there is also an executive called the Wehrwirtschaftsfuhrer (War Economics Leader) who is in charge of Plant protection against sabotage, bombing, etc., and is also supposed to keep up to date a plan for most effective use of the plant in war times. This individual need not keep the plant management up to date on his activities and reports directly to General Thomas, the head of the War Economics Ministry (Wehrwirtschaftsministerium) in Berlin.

As stated above, the labor organization in the Opel Plant had no power to discuss basic wage rates which are fixed by the Government Labor Offices. The average basic rate in the Opel Plant in 1940 was 90 pfennigs per hour. Through incentive rates applied on productive labor, the average pay of the hourly wage group of the plant was raised to 1.21 Reichsmarks per hour. Prior to August, 1939 basic rates had been somewhat higher -- [redacted] could not cite the exact figure. At that time since Opel rates were out of line with rates for comparable trades in the same district the Government ordered reductions in both the basic rate and the maximum incentive wage. The average overall reduction was probably 10% although in some cases the reductions amounted to as much as 50% because of reclassification of certain types of labor. For example, certain operations performed by women workers on which the rate had been 1.20 Reichsmarks per hour were reclassified and a basic rate of 60 pfennigs per hour was established for these operations.

[redacted] pointed out that in Germany the differential in wage rates for skilled and unskilled labor is considerably less than in this country.

Prior to August, 1939 the German hourly wage-earner was required to work 197 hours per month (approximately 45 hours a week), before receiving any overtime. These 197 hours of work could be required on any days including Sundays and holidays. At the beginning of the war in August, 1939, the work hours were changed to 10 hours per day, six days per week; in other words, a 60 hour week which could also include Sunday and holiday work. Overtime rates were figured by the company for the 15 hours extra work per week. This overtime was paid to the Government and not to the worker. In August, 1940 the work week was again changed to 12 hours x 6 days or 72 hours per week. Out of this the Government was paid the overtime for 15 hours and the worker the overtime for 12 hours. The overtime rate is 1-1/2 times basic rate.

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Based on American standards, the clothing of the German employee is very poor and since 1939 has been severely rationed. Rationing is done on a point system under which each person is given 100 points for a year's clothing needs. Since one suit takes 60 points and since the remaining 40 points would secure only approximately one shirt, two or three pairs of socks and two suits of underwear it would seem obvious that the ration is below minimum requirements in order to enforce the uses of previously accumulated surplies. The rationing system does not permit the purchase of any shoes -- a special permit is required for the purchase of shoes or even for resoling or other repairs. In [redacted] opinion, the clothing rationing causes as much unhappiness as any restriction in Germany and is particularly hard on young women who are restricted to a very inadequate supply of silk stockings, lingerie, etc. This incidentally is confirmed by the writer's own observations. Since 1937 and 1938 a few pairs of silk stockings in the luggage of a visitor to Germany has been an incredible "open sesame" into the homes of even very wealthy people. After the invasion of the low countries and France the avidity with which the highest ranking German Army Officers and pary leaders cleaned out the shops of Amsterdam, Brussels, and Paris bespeaks volumes on their accumulated appetite for decent articles of clothing. These Germans were obviously flabbergasted by the stock which existed in the occupied countries of articles which to the people of these countries seemed matter of course. As examples; hosiery and lingerie and anything else made of silk; all woolen articles; all articles containing rubber, such as women's girdles, men's garters and suspenders, and the ordinary simple elastic used for children's clothing; and of course the abundant supply of such things as razor blades, needles, and probably most astonishing of all plenty of soap containing precious fat.

As regards the food supply in Germany, [redacted] concurred that it is sufficient to maintain the health and efficiency of the population and the rationing causes little complaint. The writer believes that one of the principal reasons for so little complaint is the efficient working of the ration system. In most countries where food rationing exists there are two great sources of trouble: One, widespread bootlegging; two, bad distribution or an inadequate supply to afford each holder of a ration card the quantities to which he is entitled. The second trouble is the cause of the long lines of waiting people at the doors of food stores.

In Germany, bootlegging does exist to some extent and certainly the wealthy people are able to fill in their diet with expensive unrestricted food such as game, lobster, caviar, etc.

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But this is not sufficiently widespread to damage the morale of the population generally. As far as the working class is concerned, they very seldom have any difficulty in obtaining the food stuffs to which their rationing card entitles them. It is consequently rare to see a line of people waiting in front of a German food store.

The principal food items which a German misses in his diet are milk, butter, cream, and all fats of which he gets practically none. The egg ration is usually two eggs per week. Except during the local seasons there are no fresh fruits and practically speaking, no citrus fruits at any time. The meat ration has consistantly averaged about one pound (500 grams) per week. This is probably 30 to 50 per cent less than the normal German meat consumption but has not been the cause of any particular complaint.

[redacted] estimates that 40% of the hourly wage workers in the Opel Plant (8,000 to 10,000 men) were in the heavy worker category and were given double rations. As far as he can recall there were no heavier ration categories than this in the plant.

While it is true that the average German accepts strict food rationing quite complacently in his own country, the appetites of the Germans in the occupied territories were "Kolossal". The writer lived with a German Nazi Party member in Paris from September through November, 1940; I obtained my food ration card through the French authorities and received the regular French ration (approximately 25 to 30% less than the basic ration in Germany). He obtained his direct from the German Authorities--- his rations were almost exactly 14 time as great as mine. Obviously the German rations to Party visitors to Paris were designed to allow them to spread some largess among their "conquered friends". But there was many a German stomach ache caused by tring to make up for years of short rations of meat, butter, eggs, etc.

5. There was not only an attempt to use the Opel Plant as a political unit but effectively, the plant was a political organization. As will have been seen under the earlier remarks on the labor organization in the Plant, every individual employee is under the direct influence of the Nazi Party Labor Organization. While ostensibly this organization (the Arbeitsfront) is engaged in protecting the welfare of the workers and employees, in actual practice their primary job is the political education of the German people.

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On an average of once each month, a big political rally would be held in the plant attended by every member of the plant personnel. In between these big rallies there would be innumerable small group meetings. There would also be frequent "schools" conducted by Nazi Party Labor Organizers for plant foremen and employee supervisors. These schools purported to be of a technical character but actually a great part of their teaching was strictly political. As an example, a number of the teachers assigned to the Opel Plant made statements deprecating its American ownership and prophesying someday the German would "regain their birthright". In addition to the schools held in the plant, picked individuals from among the plant foremen and superintendents were sent to Nazi Labor Schools outside where they were deeply inculcated with the Nazi philosophy. The plants were constantly plastered with posters of the worst possible political type. Although this was an American owned plant, many of these posters which had to be put up were directly aimed at American Political figures, such as the President, various Senators, and others who made statements or speeches which did not meet with Nazi approval.

The plant had attempted to publish a house organ similar to the publications of American Companies but this publication was subjected to the censorship and re-editing of the local Nazi Party offices and quickly degenerated into a Party rather than a plant organ.

Whenever Hitler, Goebbels, or Goering made a speech of any importance whatsoever, production was stopped in the Plant and all members of the plant personnel had to gather around the loud speakers to listen to these speeches. In addition to the above activities there were plant chapters of various party organizations such as the "Hitler Jugend" (the Hitler Youth Organization); the "N.S.K.K." (The National Socialist Drivers Corps).

[redacted] there was very little enthusiasm among the great majority of the plant personnel for these party activities and initiative in this connection was entirely lacking on the part of the workers. According to [redacted] there was certainly no spontaneous push from the men for greater production.

Of course the minor Nazi Officials show some initiative which they hope will mark them in the eyes of their superiors. However, most of this initiative was shown in devising ways to ingratiate themselves with the higher party officials and was more frequently deterrent rather than stimulating to production.

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6. There were no air raids of any military importance in the Ruesselsheim Wiesbaden area up to March, 1941. Consequently the effects of air raids could not be observed in the Opel Plant However, [redacted] agree fully with the writer that the Germans as a whole are considerably more susceptible to the effects of air raids than other Europeans. [redacted] base their impression on the reaction of the Ruesselsheim Opel clerical employees who commute from Frankfurt am Main. Although this city was not bombed to any great extent air raid alarms were fairly frequent and the effect of loss of sleep seemed to be very marked on the limited number of people observed. The writer spent several nights in Antwerp during which the R.A.F. bombed the Port severely and the effects on the Germans were noticeably greater than on the Belgians.

[redacted]

There seems to be a widespread impression that the average German is a stolid, square-headed individual with a one-track mind. I believe that most people who have lived in Germany will agree that in reality the average German is very impressionable and very changeable. These changes of viewpoint and attitude are so brusque and contradictory as to frequently astonish foreigners who have occasion to observe them. Certainly the German can blow hot and cold, optimistic and pessimistic more frequently and to a greater degree than any of the Latin or Anglosaxon peoples of Europe, and this undoubtedly accounts for some of the necessity for the ultra-intensive propaganda to which the German people are constantly subjected. [redacted] feels that this question of German temperament should be a major consideration in directing propaganda to the German people. He feels that the one idea which has been most deeply impressed on them is that should they lose this war the consequences will be indescribable in chaos and suffering. At the proper time, he feels that use of a propaganda theme to dissipate this fixed idea would be extremely fruitful in alienating considerable numbers of Germans from the war effort.

7. No remarks

8. While the observations made above are essentially based on the Opel Works as a section of the German economy most remarks apply generally to all industrial plants of comparable size since the whole of German industry is organized by the same Nazi system.

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Technological Factors

1. The Opel Works was not confronted with any major technological problems because of the scarcity of certain materials. Automotive axle gears were changed from chrome nickel alloy to chrome manganese alloy. The new gears were found to be equally satisfactory. As pointed out earlier in this report, copper electrical windings were replaced by aluminum windings with no loss of quality.

Cutting tools and bearings were maintained at desired standards of quality.

In the case of both passenger cars and trucks, there has been a constant degeneration of quality since 1937 in the quality of trim material. This did not effect the functioning of the vehicle but particularly in export was the source of much customer dissatisfaction with German vehicles. One thing that was very noticeable on German vehicles, exported after the Munich conference of September, 1938, was the very bad inspection. In other words, the vehicles were full of minor defects in workmanship. [redacted] attributes this to the transfer of the most capable workers to military production and to the loss of some good inspector personnel to the Armed Forces.

2. Opel's experience in technological questions was certianly typical of German automotive industry and in general of German industry as a whole. Government regualtion of industry is carried out through a system of industry councils (Wirtschaftsgruppe) and the decisions worked out by these councils in conjunction with the proper Government authorities are mandatory on all members of the particular industry.

3. Approximately 5 per cent of German trucks were diesel powered. At peak production this would represent 3,000 to 3,500 trucks per year. In addition, a great majority of German power driven agricultural machines, building machinery and thousands of small industrial installations were diesel powered. From an operating standpoint these diesel engines were highly successful. However, as pointed out in the discussion on petroleum products, the proportion of diesel fuel required in Germany had reached a point where the most efficient use could not be made of available supplies of crude oil. In other words in refining a ton of crude on the basis of requirements too much diesel of specific grades was required and not enough gasoline. Consequently, according to [redacted] there has been a tendency to discourage further diesel production and

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even some attempt to convert certain classes of existing diesels to injection type gasoline burning engines. [redacted] was not able to advise just how far this program has been pushed nor has he any information to substantiate reports which indicate a widespread conversion of diesel motors to producer-gas.

4. Technically, gas burning motors have proved relatively successful as developed in Europe. In so far as the writer knows the best results obtained to date are approximately 80% of the engine efficiency of the gasoline operated engine. However, the system of operating a vehicle motor from gas compressed in tanks has not proven popular because of (a) shortage of equipment and materials for producing the tanks; (b) the bulk and weight of the tanks on the vehicle; (c) the transportation and handling difficulties involved in returning empty tanks to a properly equipped generating station for refilling with new gas.

The type of gas producing mechanism known generally in Europe as a "Gazogene" which is mounted on the vehicle or on a small trailer behind the vehicle and generates its own gas by burning a solid fuel such as charcoal, wood, or prepared bituminous coal, has been slightly more successful. The French and German Governments have both encouraged experimentation with this type of equipment. In neither country was there any appreciable production. [redacted] and the writer estimate there were less than 1,000 gas-fuel operated vehicles in Germany. General Motors Assembly Plants in Denmark and Sweden have gone into the production of gas generating equipment for the conversion of both passenger cars and trucks. [redacted] In general it is the understanding that this gas producing equipment has been more successful in these two countries than elsewhere because of the ready availability of surplus wood for fuel. On the other hand, only the present abnormal economic conditions would justify the use of this equipment. The cost of the gas generating equipment for a Chevrolet truck in Sweden, for instance, is almost as much as the cost of the truck. Subsequently fuel cost is relatively cheap but it is understood that the maintenance of the gas-producing equipment is bothersome and costly and as previously stated the performance of the truck is reduced by 20 to 30 per cent.

The above covers the subjects outlined in the questionnaire which you furnished me. In talking to [redacted] occasionally some German Industrial Plant would be

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mentioned which they considered especially critical in the Germany economy, particularly from the standpoint of war production. These plants are listed hereunder for whatever interest they may have:

Plant	City	Remarks
Bergische Stahl Industrie	Remscheid	Manufactures a large percentage of the precision steel forgings for the German Automotive and aircraft industries.
Bosch	Nuremberg	In so far as [redacted] know, this plant manufactures all aviation spark plugs for Germany
Mahlewerke (Electron-metall)	Bad Cannstatt near Stuttgart	Most important German manufacturer of aircraft and automotive pistons and aircraft radio cases.
The Becker Foundry	Leipzig (West)	Most important manufacturer in Germany of aluminum and magnesium castings for aircraft.
V.K.F. (Vereinigete-kuggelagerfabriken)	Schweinfurt	The German subsidiary of the Swedish Ball Bearing Trust. Has practically a monopoly on precision ball bearings for aircraft and automotive work in Germany.
Kruppwerke	Essen	Ordnance
Heinkel Flugzeugwerke Plant 1	Oranienburg (30 miles outside Berlin)	According to [redacted] the largest aircraft factory in Germany. He has visited the plant personally as well as most of the other aircraft factories of Germany and states that this is incomparably the biggest and most complete

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Plant	City	Remarks
Plant 2	Rostock	Smaller than the Oranienburg Plant but vital to the German Air Force.
Junkers	Dessau	Still one of the most important German Aircraft factories.
M.A.N.	Augsburg	Practically the sole producer of Diesel engines for submarines.
Tevis G.m.b.H.	Frankfurt am Main	Former manufacturer of electrical refrigerators and other appliances now the principal producer of many vital aircraft parts.
I.G. Farbenindustrie	Near Frankfurt am Main (suburb)	(Germany's two principal Buna Rubber producing plants.
Continental Tire Co.	Hanover	(

[redacted] were of the opinion that each of the above plants produces such a large proportion of the total ourput of articles which they manufacture that the destruction of any one of these plants would be a most serious blow to the German war machine. If further information along this line is desired, [redacted] suggested that [redacted] knows more about the distribution of the manufacture of aircraft and automotive components in Germany than anyone in this country at the present time. [redacted] His position was such that he had occasion to visit a great many German Plants and to be familiar with their productive capacity, processes, methods, etc.

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The writer will be pleased to discuss any phases of the above report or to make any further contacts in this connection which you may desire.

Attached for your information is a copy of a report on the Utilization of civilian automotive maintenance facilities by the German Army which may be of some interest.

Yours very truly,

[redacted]

Incl.
Copy of report

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~~CONFIDENTIAL~~

January 9, 1942

SUBJECT: Report on German Military Transport

TO: Colonel Russel A. Osmun
Office of The Quartermaster General

1. The Military Attache Reports which you recently forwarded to me are returned herewith. There is nothing that I can add on the specific subjects of German Army Motor Transport Organization described in these reports. There is, however, one important phase of German motor maintenance which is not mentioned and on which the following comments may be of interest.

2. Based on my observations in Germany and later in German occupied France and Belgium, I believe it can be said that a basic principle of German military maintenance operation is to utilize to the greatest possible extent the civilian facilities which are available. In Germany, prior to the invasion of the low countries, this was manifested as far as motor transport is concerned by the extensive use of private garages, service stations, and factory service departments for the maintenance of army vehicles. In the occupied territories, the invading armies were closely followed by "Kommissars" whose job was to organize the local automotive industry for the most effective utilization by the German Army.

3. These Kommissars are civilians attached to the automotive branch of the Ministry of Transport, (Verkehrs Ministerium). This Ministry is in direct control of the entire German automotive industry including its dealer organizations, independent garages, etc. The head of the Automotive Industry Branch is General Von Schell. While the organization is purely civilian, it is headed, like many other Government Departments in Germany, by an Army Officer who maintains his rank in the German Army. General Von Schell is to all intents and purposes the dictator of the automotive industry with full power to decide what models a given company may build, what quantities, at what prices they shall sell them, and any other pertinent question. Although not directly connected with the Army in any way, a very close liaison is maintained between General Von Schell's office and the Army General Staff regarding the utilization of the automotive industry in the service of the Army. When the German armies invaded the low countries and France, General Von Schell's authority was immediately extended to these territories and his staff took over the job of organizing the local automotive plants and other facilities.

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4. It was obvious that a thorough job of intelligence and minute preparation had been done prior to the invasion. As an example, the Kommissar appointed by General Von Schell to take over all General Motors operations in the low countries and in France was a former General Motors distributor for Germany who on one excuse or another had made frequent trips to General Motors Operations in Belgium and France over a period of years and was thoroughly familiar with their activities and potentialities. The Kommissar appointed to organize the Ford operations in the same countries was the German director of the Ford Plant in Cologne, Germany.

Another example of pre-war preparation will be of interest; for several years prior to 1939, the appointment of distributors and dealers in other countries by German car and truck manufacturers was closely watched by the German Transport Ministry and Military Authorities. This was particularly true of the countries adjacent to Germany such as Hungary, Bulgaria, Yugoslavia, and the Scandinavian Countries. Factory managements were under constant pressure to eliminate Jewish dealers (the only commercially successful ones in several of these countries), to appoint firms of marked pro-German sympathies, to extend beyond all reasonable commercial requirements the service facilities in the Balkans, etc. Approximately 70% of German automotive exports were products of the Opel Werke, a General Motors subsidiary. The distribution of Opel cars and trucks outside of Germany was entirely controlled by General Motors Overseas Operations, New York, through their various local assembly plants. This method of operation was a thorn in the sides of the German Authorities who were thus unable to exert the same pressure on the export Opel dealers that they exerted on the dealers for other German makes. Nevertheless, over a period of years they were able to influence the development of the major bases for a very sound automotive maintenance organization throughout Hungary and the Balkan Countries. This organization now undoubtedly is serving its purpose.

5. The German Kommissar took possession of the General Motors Plant in Antwerp, Belgium within 48 hours after the occupation of that city. The plant was not requisitioned but placed under "protective custody" (Sicherstellung), under the authority of the German Military decree which authorizes the Commanding General in any area to appoint a Kommissar or "Custodian" of any business whenever he considers it necessary or desirable in the interest of the Reich. Once appointed the Kommissar has full

authority to operate the business as he sees fit and is, to quote the decree, "responsible only to the authority which appointed him".

6. Immediately upon occupation of the plant in Antwerp the Kommissar rehired approximately 800 of the 1,500 local workmen and employees, proceeded to clean up the plant, which had been somewhat sabotaged by the retreating Belgians and French, and to make a complete inventory of the materials on hand. Sales to civilians were naturally stopped immediately throughout the occupied territories. Every automotive dealer was required to submit an inventory of vehicles and spare parts on hand. With the complete capitulation of the Belgian Army a few days later all army automotive equipment and spare parts stores were taken over as prizes of war. The Army Motor Maintenance Corps (H.K.P.) immediately returned all General Motors spare parts to the General Motors Plant, placing them under the custody of the Kommissar while Belgian Army vehicles were sorted out according to their make and state of repair and arrangements made for their reconditioning.

7. The method of handling this reconditioning is interesting. Through pre-war intelligence the best equipped garages and service stations throughout Belgium had been spotted and their potential capacity estimated. These shops were immediately occupied by the German Army. The Kommissar then entered the picture and made the following proposals to the owners of each of these shops:

a. A contract could be signed employing the shop to work exclusively for the German Army.

b. The contract would be on a "cost plus" basis -- usually the owner would be required only to submit his payroll on which he was paid 110%. Any spare parts required would be furnished by the German Army or if available in the inventory of the shop would be billed at list price less 25%.

c. If the owner was agreeable he could remain in charge of his business -- a non-commissioned German Officer would be placed in the shop for liaison between the owner of the German Army personnel visiting the shop on business but otherwise there would be no occupation. The owner would be given full charge of the management.

d. If the owner of the shop would not accept this proposition, a Kommissar would be appointed to run his business and he would be out in the cold.

8. Obviously the owners of most businesses in the occupied territories accepted the German proposition inasmuch as it afforded them a livelihood for themselves and permitted them to give work to their employees. In a number of instances the owners of shops had fled the country in advance of the German Armies; in these cases either the responsible employee remaining was placed in charge of the business under the above conditions or a Kommissar was appointed to run the shop.

9. In talking to the Kommissar of the General Motors Assembly Plant in Belgium, he mentioned several times the figure of 85,000 vehicles as the number which the German Army found as prizes of war or requisitioned from the civilian population in Belgium and Holland. Between June and September, 1940 all of these vehicles in addition to thousands of German vehicles were run through these shops and put in first-class running order. Obviously these shops were not 100% efficient. In the first place the German Army is cluttered up with an extremely non-descript lot of vehicles -- in one big shop in Paris I personally counted 118 different makes of German Army vehicles in the shop at the same time. Obviously this diversity of makes and models created a very tough spare parts problem for one thing and secondly it gave the workers who were unsympathetic to the Germans a good excuse for stalling by saying their tools wouldn't fit certain cars or that they didn't understand the functioning of certain makes. However, by enforcing a rigid discipline and by impressing on management and workers alike that the price of detectable sabotage was being shot against the nearest wall very excellent results were obtained.

10. It should not be deduced from the above that the German Army did not come equipped with its own maintenance facilities. Maintenance comparable to the first and second echelons in the United States Army were of course performed in the field and all indications were that they were very efficiently performed. However, their organization appeared to be set up on a basis whereby any vehicle which could not be promptly repaired in the field would be evacuated to one of the civilian shops mentioned above where it would be repaired and returned to a divisional or army pool.

11. There was surprisingly little pressure for expediting vehicles through the shops except in the case of heavy duty trucks. I believe this was due to the fact that most civilian vehicles were prohibited on the road and there was always a large surplus of passenger cars and light trucks from which vehicles could be requisitioned when required.

12. Returning to the functions of the Kommissar in charge of General Motors Operations -- after an inventory had been accomplished, the Assembly Plant in Belgium was put in operation to build up approximately 2,100 Chevrolet trucks and some 800 or 900 passenger cars for which the materials were on hand. These were sold to the German Army. The Plant was then established as central headquarters for spare parts for American cars in the low countries and as a reconditioning plant for the British vehicles recuperated at Dunkirk.

13. It was estimated that after "cannibalizing" sufficiently to supply parts for damaged vehicles, approximately 16,000 British Military vehicles were recovered. Since there were no spare parts available on the continent for these British trucks and since the supply of spare parts for American vehicles was obviously limited, it was decided to establish a parts manufacturing center in the Antwerp General Motors Plant. Since, like all assembly plants, this one had very little machine tool equipment, tools were requisitioned from various factories throughout Belgium and installed in the plant.

14. As previously stated the same Kommissar who was put in charge of General Motors Operations in Belgium was subsequently charged with General Motors Operations in France. The pattern of his activity in that country was very similar except that for various reasons of convenience any unassembled material found in Paris was sent to the bigger plant in Antwerp and the Paris Plant turned into a repair shop.

15. The General Motors Kommissar employed a German staff of approximately 25 people in Belgium and France. These were all civilians and consisted of spare parts experts, shop superintendents, and General Administrative Executives. This personnel was all picked by the Kommissar from his own German organization. This staff and the Kommissar were paid by the local General Motors Companies in which they worked. As I stated previously, the Kommissar was assigned by General von Schell of the Ministry of Transport in Berlin and his actual

local appointments were under the authority of the Commanding Generals of the occupied territories. Obviously the liaison between the Kommissar and the local Military Authorities was extremely close and to all appearances was very satisfactory.

16. It might be judged from the above that the system of contractual maintenance was used by the German Army only in occupied territory. This is not the case. It may be of interest to note that the Kommissar in charge of General Motors operations in the occupied territory was also contractor in Germany to the German Air Force for the repair and maintenance of military planes. In this connection he had constructed and operated two very large repair shops. According to his statements which were corroborated by Luftwaffe Officers with whom I spoke, all planes which were damaged beyond quick repair at Air Field shops were turned over to this organization. They dismounted the motors and returned these to the motor manufacturers for reconditioning and then completely reconditioned the fuselage, wings, undercarriages, etc.

SUMMARY:

17. In the third and higher echelons of motor maintenance, the German Army employs available civilian facilities and personnel to the greatest possible extent. This system of contractual maintenance has given satisfactory results in Germany, in her satellite states, and even in the occupied territories.

18. I attach hereto a copy of a further report on German economic conditions as related to the automotive industry prepared for the Coordinator of Information.

[redacted]

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Incls.
Military Attache Reports
Report to Coordinator of Info.